

REMARKS

This responds to the Office Action mailed on January 6, 2005. No claims are canceled and no claims are added. Thus, claims 1-64 remain pending in this application.

Claim 40 has been amended to correct punctuation, replacing a semicolon with a comma. The amendment does not change the scope of claim 40.

Information Disclosure Statements

Applicant submitted a Supplemental Information Disclosure Statement and a 1449 Form on January 7, 2005, and submits with this Response another Supplemental Information Disclosure Statement and a 1449 Form listing additional references. Applicant respectfully requests that initialed copies of the 1449 Form be returned to Applicants' Representatives to indicate that the cited references have been considered by the Examiner.

§102 Rejections of the Claims

Claims 1-2

Claims 1 and 2 were rejected under 35 U.S.C. § 102(e) for anticipation by Sakamoto (U.S. 6,288,923). Applicant respectfully traverses the rejection for at least the following reasons.

With respect to independent claim 1, Applicant is unable to find, among other things in the cited portion of Sakamoto, a cache memory device including a plurality of memory cells and at least one register adapted for storing access information for accessing at least one array stored in the plurality of memory cells, as recited in claim 1. The Office Action states the tag register array (21) of Sakamoto stores address information regarding a cache memory array. Applicant respectfully disagrees.

The tag register array (21) of Sakamoto stores a tag address A-Tag (Sakamoto at col. 4, lines 19-22), which includes the high order bits of the address in main memory (not cache) to be written/read (Sakamoto at col. 3, lines 60-67). The comparison circuit 23 compares the tag address A-tag with data (written tag address) read out of the tag register array 21 based on the cache address A-cache to determine whether they coincide (HIT) or not (MISS) (col. 4, lines 35-39). An address of the data register array 26 is selected by the cache address A-cache, the output thereof is controlled by the hit signal HIT, and the writing thereof is controlled by the cache

write control signal WRITE (col. 4, lines 59-62). The output of the data register array 26 is controlled by the signal HIT by activating/inactivating output buffers 32 (col. 5, lines 52-54).

Applicant respectfully submits that the tag register array 21 is used to indicate cache hits and cache misses and further submits that memory cell(s) in the data registry array 26 are accessed by the address selected by cache address A-cache. Thus, Applicant respectfully submits that the rejection using Sakamoto has not shown at least one register adapted for storing access information for accessing at least one array stored in the plurality of memory cells.

Claim 2 depends directly on independent claim 1, and is believed to be in condition for allowance at least for the reasons provided with respect to claim 1.

Reconsideration and allowance of claims 1 and 2 are respectfully requested.

Claims 11-12

Claims 11 and 12 were rejected under 35 U.S.C. § 102(b) for anticipation by Tremblay et al. (U.S. 6,014,723, “Tremblay”). Applicant respectfully traverses the rejection for at least the following reasons.

With respect to independent claim 11, Applicant is unable to find, among other things, in the cited portion of Tremblay an electronic system including an array cache memory device adapted for caching array data, and a boundary policy enforcement and index mapping unit coupled to the cache memory device, as recited in claim 11. The Office Action cites only col. 3, lines 28-31 of Tremblay, but Applicant is unable to find all the elements of the recited claim in this or any other portion of the reference. Pursuant to 37 C.F.R. § 1.104(a)(2), if the examiner chooses to maintain the rejection, Applicant requests the Examiner to clearly identify at least the array cache memory device for caching array data, so that Applicant can judge the propriety of continuing prosecution.

Claim 12 depends directly on independent claim 11, and is believed to be in condition for allowance at least for the reasons provided with respect to claim 11.

Reconsideration and allowance of claims 11 and 12 are respectfully requested.

Allowable Subject Matter

Applicant acknowledges the allowance of claims 7-10 and 23-64.

Claims 3-6 and 13-22 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With respect to claims 3-6 and 13-22, Applicant respectfully asserts that the base claims for these claims are in condition for allowance for the reasons provided above, and hence these dependent claims are in condition for allowance. Applicant respectfully requests reconsideration and allowance of claims 3-6 and 13-22.

Reservation of the Right to Swear Behind References

Applicant maintains its right to swear behind any references which are cited in a rejection under 35 U.S.C. §§102(a), 102(e), 103/102(a), and 103/102(e). Statements distinguishing the claimed subject matter over the cited references are not to be interpreted as admissions that the references are prior art.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6960 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

SHANE C. HU ET AL.

By their Representatives,

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Date 4-6-05

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6 day of April, 2005.

JONATHAN FERGUSON

Name

Jonathan Ferguson

Signature